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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,312	06/15/2007	Naoki Urushihata	060625	8152
23850 7590 05/26/2010 KRATZ, QUINTOS & HANSON, LLP 1420 K Street, N.W. 4th Floor WASHINGTON, DC 20005				
EXAMINER				
NATNITHITHADHA, NAVIN				
ART UNIT		PAPER NUMBER		
3735				
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05/26/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/590,312

**Applicant(s)**

URUSHIHATA ET AL.

**Examiner**

NAVIN NATNITHITHADHA

**Art Unit**

3735

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 February 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/22)
- Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. According to the Amendment, filed 24 February 2010, the status of the claims is as follows:

Claim 1 is currently amended; and

Claims 2-12 are cancelled.

2. The objections to claims 3-12 are WITHDRAWN in view of the cancellation of these claims in the Amendment, filed 24 February 2010.

### ***Response to Arguments***

3. Applicant's arguments, see Remarks, p. 5, filed 24 February 2010, with respect to the rejection of claims 1 and 2 under 35 U.S.C. 102(e) as being anticipated by Burch et al, U.S. Patent No. 7,255,677 B2 ("Burch"), have been fully considered, and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made below.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not clear whether the claim's preamble, which states "A brassiere formed in such a manner that a housing part for housing a diagnostic sensor is formed...", is directed to a brassiere or a diagnostic sensor.

The alternative phrase "in the case where..." makes the limitation "an abnormality occurs in a mamma, an antigen or ligand as a cause of the abnormality is detected by the diagnostic sensor in the housing part, and the abnormality is notified" unclear as to whether the limitation is part of the claim or not (the limitation is not positively recited).

The phrase "and/or" makes the limitation "body fluid of the living body" unclear as to whether the limitation is part of the claim or not.

The limitation "that the detecting means is formed by applying or attaching an antibody or protein on or near an integrated circuit formed on a semiconductor substrate, a part to which the antibody or protein is applied or attached and the integrated circuit are electrically connected to each other via a conductor" is subject matter directed to a process step for manufacturing the detecting means. The process step does not further limit the detecting means, which is an element of an apparatus, i.e. the "diagnostic sensor". Thus, no patentable weight will be given to the above limitation and the limitation should be deleted.

The limitation "that the signal generating means is formed in the integrated circuit" is subject matter directed to a process step for manufacturing the detecting means. The process step does not further limit the signal generating means, which is an element of an apparatus, i.e. the "diagnostic sensor". Thus, no patentable weight will be given to the above limitation and the limitation should be deleted.

The limitation "when a surface acoustic wave current which is generated when the antibody and the antigen bind to each other or the protein and the ligand bind to each other is transmitted via the conductor to the integrated circuit, a signal corresponding to the surface acoustic wave current is transmitted to the outside of the integrated circuit" is either grammatically incorrect or unclear as to what is being claimed. The claim does not positively recite the subject matter that Applicant is attempting to claim. In addition, there appears to be two distinct limitations for the "signal generating means", where the first corresponds to "generating a signal...", and the other "the surface acoustic wave current is transmitted. The Examiner's best interpretation of the above limitations is the following:

a signal generating means for detecting any of the pathogens, antigen, or ligand and generating a surface acoustic wave current when either the antibody and the antigen bind to each other or the protein and the ligand bind to each other; and  
a signal transmitting means for transmitting a signal corresponding to the surface acoustic wave current.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Steinthal et al, U.S. Patent No. 7,034,677 B2 ("Steinthal").

**As to claim 1**, Steinthal teaches the following:

A brassiere formed in such a manner that a housing part for housing a diagnostic sensor is formed (a brassiere is within the scope of the Steinthal's device; Steinthal states a "Portable and wearable chemical detector devices, such as badges,...", see Abstract; also Steinthal states "All components of device 10 are preferably coupled via one or more busses, but they may be individually directly connected as suitable for particular applications. In wearable badge device embodiments, an attachment device 45 such as a clip, strap or a pin is provided for attachment to a pocket, shirt lapel, belt, around the neck, etc as is convenient or necessary for the particular application.", see col 7, ll. 51-57), and in the case where an abnormality occurs in a mamma, an antigen or ligand as a cause of the abnormality is detected by the diagnostic sensor in the housing part, and the abnormality is notified (see col. 27, ll. 26-49),

the sensor 10 comprises:

a detecting means ("sensor devices and arrays") for detecting any of various pathogens existing in a part of a living body and/or body fluid of the living body or a gas emitted from the living body, or an antigen or ligand corresponding to the abnormality or

disease (see col. 27, l. 26, to col. 28, l. 5), that the detecting means is formed by applying or attaching an antibody or protein on or near an integrated circuit formed on a semiconductor substrate, a part to which the antibody or protein is applied or attached and the integrated circuit are electrically connected to each other via a conductor (see col. 25, ll. 8-27, and col. 27, l. 52, to col. 28, l. 5); and

a signal generating means ("processing module") for generating a signal when the detecting means detects any of the pathogens, antigen, or ligand, that the signal generating means is formed in the integrated circuit, and when a surface acoustic wave current which is generated when the antibody and the antigen bind to each other or the protein and the ligand bind to each other is transmitted via the conductor to the integrated circuit (see col. 4, ll. 45-63), a signal corresponding to the surface acoustic wave current is transmitted to the outside of the integrated circuit (see col. 4, ll. 45-63 and col. 27, l. 52, to col. 28, l. 5).

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The other patents cited in the PTO-892 teach subject matter related to the Applicant's claims. The Examiner suggests reviewing these patents before responding to the present Office Action.

7. Applicant's amendment, filed on 24 February 2010, necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS**

**MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **NAVIN NATNITHITHADHA** whose telephone number is (571)272-4732. The examiner can normally be reached on Monday-Friday, 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor, II can be reached on (571) 272-4730. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Charles A. Marmor, II/  
Supervisory Patent Examiner  
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/N. N./  
Patent Examiner, Art Unit 3735  
05/24/2010